Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
FCC Seeks Comments and Data on Actions to Accelerate Adoption and Accessibility of Broadband-Enabled Health Care Solutions and Advanced Technologies	)	GN Docket No. 16-46

COMMENTS OF GEISINGER HEALTH SYSTEM

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May 24, 2017

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EXECUTIVE SUMMARY

Geisinger Health System ("Geisinger") is a non-profit healthcare system serving a population of 2.6 million residents located in predominantly rural areas of central and northeastern Pennsylvania. As a pioneer in developing telemedicine and telehealth programs for patient care in rural communities and an advocate for the needs of rural healthcare providers, Geisinger welcomes the opportunity to assist the Commission's efforts to gather information on how the Commission can most effectively support the adoption and accessibility of broadband-enabled health care solutions.

The Healthcare Connect Fund remains an essential support mechanism for rural hospital systems to be able to continue investment in and expansion of telehealth and telemedicine programs to deliver high quality specialist care and treatment to rural communities. Unfortunately, as of FY 2016, the Rural Healthcare Fund is no longer adequately funded to cover the demand for broadband support from eligible health care providers. The pool of eligible providers has been progressively expanded without a concomitant increase in available funding. Funding requests from rural hospital systems now substantially exceed the fund's $400 Million cap and have already led to a 7.5% pro-rata reduction in funding of eligible requests in FY 2016. There are well-founded concerns given current demand trends that deeper pro rata reductions in Fund support are imminent. Geisinger urges the Commission to raise the funding cap to adequately meet the broadband funding needs of eligible health care providers. In the short term, the Commission should immediately adopt a rule allowing for unused funds from prior years to be available to fund eligible requests for funding, just as a Commission rule provides under the E-Rate Fund. In addition to raising the funding cap, Geisinger requests that the Commission consider providing expanded support for telehealth and telemedicine models utilized outside of the traditional community hospital, such as in patient residences and micro-clinics to expand the

deployment of timely and cost-effective telehealth solutions and reduce treatment costs associated with hospital admissions. By making these modifications to the Rural Healthcare Program, the Commission can demonstrate its commitment to meeting the "**Broadband Health Imperative**," and expand broadband telehealth support for rural communities which will improve patient care and medical outcomes well into the future.

I. Introduction

Geisinger Health System ("Geisinger") is one of the nation's largest rural health services organizations, serving over 2.6 million residents in 44 counties in central and northeastern Pennsylvania. A leader in deploying advanced health care technologies, Geisinger delivers high quality, specialized healthcare throughout the rural communities that it serves. Geisinger is widely known for its innovative use of Electronic Medical Record Systems ("EMRS") and the development and implementation of pioneering telemedicine and telehealth models, including its ProvenHealth Navigator, an advanced medical home care model, and the ProvenCare Program, a multicomponent program that works with physicians in rural communities to build acceptance for best practices and improved workflow.

Geisinger's physician-led health system comprises more than 21,000 employees, a 1,100 member multi-specialty group practice, an eight hospital campus, two research centers, and a 47,000 member health plan. As a standard-bearer of the telemedicine and telehealth community, Geisinger has unique insight into the broadband needs of innovative hospital systems serving rural communities. Geisinger welcomes the opportunity to comment on actions needed to accelerate adoption and accessibility of broadband-enabled health care solutions and advanced technologies.

Geisinger is particularly well-suited to comment on the beneficial impact that the FCC's Rural Health Care Program ("RHCP") has had on its ability to extend high quality specialty care to often distant rural communities that it serves through telemedicine and telehealth programs. Since 2007, Geisinger has been an active participant in the Rural Health Care Program, initially receiving support through the Rural Health Care Pilot Program ("RHCPP"). Since the Healthcare Connect Fund ("HCF") was created to succeed the RHCPP, eligible health care

providers participating in the Geisinger HCF Consortium have continued to receive support through the HCF. To date, over the past 3 years, 15 participating members of the Geisinger HCF Consortium have received essential funding under the Rural Health Care Program to enable Consortium members to lease approximately 95 broadband circuits. Over the years, Geisinger has helped obtain broadband infrastructure support for qualifying rural health care providers participating in its Consortium and has used HCF funding to expand its broadband-supported telehealth and telemedicine programs to provide improved health care to rural communities.

II. Geisinger's Services Provide Crucial Medical Support to a Rural, High-Risk Population

Geisinger and its affiliated rural health care providers in the Geisinger HCF Consortium serve a predominantly rural area of central and northeastern Pennsylvania[1] that has a significant population of elderly, high-risk residents suffering from chronic diseases. Geisinger's patient base includes an increasingly aging population, and a high percentage of lower income residents who often have a higher than average incidence of chronic diseases. The average poverty rate in the Geisinger service area is 13.92%, and 13.26% of residents are uninsured. Approximately 78% of the population in Geisinger's service area resides in rural-designated counties.

The high-risk population in Geisinger's service area suffers from a high incidence of serious co-morbidity diseases including chronic heart failure, chronic obstructive pulmonary disease, diabetes and cancer. More than 60% of the population has one or more chronic health conditions due in part to the average age of the population in the rural counties of central and northeastern Pennsylvania, which has the third highest percentage of elderly in the United States. Eighteen percent of Geisinger's service area population is aged 65 years or older.

[1] See Map of Geisinger Medical Laboratories, 2016 available at https://www.geisingermedicallabs.com/who/images/courier_coverage_large_2016.jp.JPG .

Funding from the RHCP has bolstered Geisinger's ability to connect to this elderly, at-risk patient population and provide patients with high-quality medical care, expanded access to medical specialists and improved patient engagement at or near patient homes. These telehealth initiatives have saved lives and improved health outcomes and quality of care by allowing patients in rural communities to benefit from much quicker access to specialty care that is typically unavailable or in short supply. And through its telehealth programs, patients in the rural counties that Geisinger serves can avoid the hardship of travel and delayed medical care. Telehealth programs available through Geisinger's HCP Consortium have saved patients approximately 3,000 hours of travel time to obtain specialty care from 2014 to date, many of whom face geographic, physical and financial challenges when traveling to receive qualified specialty care.

III. Funding from the Rural Health Care (RHC) Program Healthcare Connect Fund (HCF) Supports the Broadband Infrastructure Needed to Maintain Essential Telehealth Services for Rural Patients (Connect2Health Task Force Objective 3)

Geisinger has been among the "early adopters of telehealth[2]" and a recognized leader in the use of wired technology for patient care.[3] Geisinger leads the Geisinger HCF Consortium, which was designed and organized to support rural community hospitals and clinics and other rural health care providers. Broadband connections with sufficient bandwidth to support telemedicine applications are either not available in many rural areas in central and northeastern Pennsylvania, or are prohibitively expensive. However, the FCC's HCF Program has enabled the Geisinger HCF Consortium to provide essential medical care to medically underserved patients such as the elderly and patients with chronic illnesses or chemical dependency in rural

[2] "These five health systems are making the best use of telemedicine", MedCity News, HealthIT (Feb. 27, 2015) at http://medcitynews.com/2015/02/five-health-systems-making-best-use-telemedicine/

[3] Geisinger Named Among Nation's 'Most Wired' Providers, American Hospital Association Health Forum, Aug. 1, 2016 available at https://www.geisinger.org/en/about-geisinger/news-and-media/news-releases/2017/03/24/16/36/geisinger-named-among-nations-most-wired-providers.

areas. These patients receive specialized medical care through broadband–enabled health care solutions that otherwise would not be possible without disruptive, higher cost admissions, and permit more immediate delivery of medical care closer to home.

Geisinger's Telemedicine Consult Program enables patients living in rural areas to receive timely care from Geisinger specialists at rural community health facilities much closer to where they reside. This includes patients being seen on a scheduled, outpatient basis, or patients needing a bedside or Emergency Department consult on an "on demand" basis. For example, a rural community hospital or Geisinger-owned outpatient clinic that has no neurologists on staff can use Geisinger's "TeleStroke" program. Geisinger launched its TeleStroke program in August, 2014 to provide stroke patients with 24/7 access to a neurologist in often critical, life-threatening emergency cases, allowing the neurologist to observe and interview the patient in real time.[4] Similarly, if a community hospital or clinic has no rheumatology clinic, it can be provided with TeleRheumatology. In each case, whatever the subspecialty needed, the telemedicine service is tailored to the clinical patient care requirements, the specialists' technical needs, and the broadband connectivity needed to ensure a reliable, high-quality remote consultation.

Moreover, HCF-supported broadband supports local and community rural health care services by freeing up capital within the lean budgets of rural community hospitals and clinics to purchase telemedicine equipment such as monitors, while allowing patients to be treated at their local health care facility without being transferred. For example, using TeleStroke as one example, using Medicare payment rates in 2014, each Emergency Department patient treated and transferred would yield $3,200 in patient revenue compared to $1,500 in Emergency Department

[4] "Telemedicine technology expands services to rural areas", The Scranton Times-Tribune (August 25, 2014) at http://thetimes-tribune.com/news/telemedicine-technology-expands-services-to-rural-areas-1.1741299

revenue and $10,228 in inpatient revenue at a community hospital.[5] HCF-funded broadband thus allows rural patients in more remote areas to receive specialty medical care closer to home, more quickly, while having a major, positive downstream economic impact supporting rural community hospitals.

Similarly, the Geisinger TeleICU, launched in March, 2014, is a patient-monitoring center located on Geisinger's main campus in Danville, PA. The Geisinger TeleICU, staffed 24x7 with critical care nurses and physicians, works in close coordination with onsite ICU physicians in numerous community hospitals as much as 100 or more miles away, such as Geisinger Community Medical Center in Scranton, enabling critical care physicians and nurses to monitor ICU patients via a high resolution live video feed. The TeleICU technology analyzes patient data from monitors, life-support systems, EHRs, medical orders, and other sources. Emergency RNs alert medical staff if the patient is trending toward a serious health event. A tele-ICU team can monitor as many as 60 patients at one time depending on the need, and the use of tele-ICU teams has improved mortality rates and reduced the need for lengthy or repeated hospital admissions.[6] In 2012, the use of telehealth technology cut Geisinger's hospital readmission rates by 44%, significantly reducing Medicare costs.[7] That statistic alone compels the conclusion that the HCF Program funding is providing a significant return on investment in terms of federal Medicare and private health insurance cost savings alone. These telemedicine capabilities extend the ability of a limited number of available specialists to provide timely

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[5] July 14, 2014 Letter of Frank J. Trembulak, Executive VP and Chief Operating Officer, Geisinger Health System, Comment on Healthcare Connect Fund Annual Reports, filed in WC Docket No. 02-60.

[6] "How one health system is using telemedicine in ICUs to combat staff shortage trend", MedCity News, Health IT (Dec. 26, 2012) at http://medcitynews.com/2012/12/how-one-health-system-is-using-telemedicine-in-icus-to-combat-staff-shortage-trend/

[7] "These five health systems are making the best use of telemedicine", MedCity News, HealthIT (Feb. 27, 2015) at http://medcitynews.com/2015/02/five-health-systems-making-best-use-telemedicine/

medical care to patients in remote areas that lack access to adequate critical care physicians and nurses.

Similarly, for long-term, comprehensive patient care, Geisinger has successfully used a model called the ProvenHealth Navigator[8] ("PHN"), which utilizes electronic devices and telemonitoring protocols for high-risk patients to capture real-time data on patient health to coordinate care and prevent acute health incidents. A 2015 study on the use of the PHN model on patients found that total patient costs declined by approximately 7.9% with use of PHN over a 90-month period and acute inpatient admission rates fell by 18%.[9] Over the long-term, utilization of the telehealth model is expected to significantly reduce costs for acute inpatient care and further reduce acute inpatient admission rates.[10]

IV. Geisinger Urges the FCC to Provide Urgently Needed Support for the Nation's Telehealth Infrastructure by Increasing the Insufficient $400 Million Cap to Better Meet Current Demands for Telemedicine

Despite the disproportionately large return on investment that the HCF Program has had in efficiently delivering high quality, specialized health care in rural areas, reducing mortality rates and hospital readmissions, and improving the financial health of local community hospitals, as of Funding Year ("FY") 2016, the RHC Fund is no longer adequate to cover funding demand from eligible health care providers. Because the RHC Fund has a $400 Million cap under current FCC rules,[11] and total qualifying funding requests received during the September 1-November 30, 2016 filing window period exceeded funding available for FY 2016, USAC, in accordance with FCC rules, pro-rated all such funding requests for 2016 at 92.5%, or a reduction

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[8] ProvenHealth Navigator, Our Advanced Patient-Centered Medical Home Model Improves Patient Outcomes, XG Health Solutions powered by Geisinger, available at https://xghealth.com/provenhealth-navigator/.
[9] ProvenHealth Navigator Improves Patient Outcomes, Reduces Cost of Care, The Business Journals, April 6, 2015 available at http://www.bizjournals.com/prnewswire/press_releases/2015/04/06/DC73005.
[10] *Id.*
[11] 47 C.F.R. § 54.675(a)

of 7.5%, after deducting USAC's administrative expenses.[12] Should the total amount of qualifying funding requests exceed the RHC Program funding available in the pending initial filing window period of March 1-June 30, 2017 for FY2017, USAC has announced it will again pro-rate funding for the 2017 initial filing window.[13]

The pro rata reduction factor that has applied to qualified RHC Program funding requests in FY 2016 confirms that the RHC Program is insufficiently funded to meet qualified demand for this essential program. The RHC Program has already been challenged because eligible providers are already receiving a heavily discounted 65 percent of the cost of eligible expenses (or a health care provider contribution of 35 percent of the total cost).[14] By contrast, health care providers participating in the Rural Health Care Pilot Project received an 85% discount of eligible expenses while only having to make a 15 percent contribution. At the same time, while available funding has remained stagnant, the demands on the RHC Program have been rapidly escalating. There has been a steep increase in funding demand for the RHC, first signaled by the $377.64 Million in payments made in FY 2015 (doubling the amount of funding provided in 2013 of $191 Million) which ended nearly one year ago on June 30, 2016. Not only are hospital and other healthcare provider facilities eligible providers, but so are off-site data centers and off-side administrative offices.[15] Moreover, the pool of eligible health care providers was also recently significantly expanded by 2016 legislation making skilled nursing facilities eligible for RHC support.[16] Unfortunately, no additional funding was provided either by Congress or the FCC to accommodate this widening base of providers eligible for RHC funding. This is having

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[12] http://www.usac.org/rhc/tools/2016-filing-windows.aspx; *see* 47 C.F.R. § 54.675(f).

[13] Funding Request Filing Window Periods, USAC.org, available at http://www.usac.org/rhc/tools/additional-filing-windows.aspx.

[14] 47 C.F.R. § 54.633(a) "Health care provider contribution".

[15] 47 C.F.R § 54.637.

[16] *See* Frank R. Lautenberg Chemical Safety Act for the 21st Century Act, Title II – Rural Healthcare Connectivity, Pub. L. No. 114-182 (2016), signed into law by President Obama on June 22, 2016.

the inevitable effect of triggering an additional "ad hoc" discount that is diluting the beneficial impact of RHC funding to established legacy participants in the RHC Program. If this unacceptable trend continues, it will threaten the ability of the RHC Program to retain existing health care providers or to attract the participation of new eligible health care providers. The support provided will be inadequate to encourage Geisinger and Geisinger HCF Consortium members to purchase additional broadband services and network equipment needed to support rural telehealth services, not to mention the much needed telemedicine modalities that outlying rural hospitals need to purchase (which are unsubsidized by RHC funding).

Given the "**Broadband Health Imperative**"[17] recognized by the Commission in its Public Notice, the FCC needs to fundamentally reassess the RHC Program funding cap, which has been capped for too long at a modest $400 Million under the total $10 Billion Universal Service Fund, and to re-align the size of the RHC Program funding with the maturing demands on the Program. This program is no longer underutilized as it was when the $400 Million annual cap for the RHC Program was established years ago. The broad-ranging societal telehealth benefits of improved patient outcomes, lower mortality rates, Medicare and other health care savings, and support for rural hospitals and clinics that the RHC Program promotes are well documented. Those goals need to be better supported by the RHC Program now that qualifying rural health care provider participation is surging. As the Commission recognizes, "demand for health care services is increasing," and with it the use of broadband to deliver effective and efficient health care. For that positive trend to continue in underserved rural areas, broadband infrastructure spending needs to increase to encourage adoption and deployment in underserved rural communities that cannot afford these facilities otherwise. Broadband infrastructure support

[17] Public Notice at 3.

also allows local rural hospitals and clinics to free up limited capital to use toward the purchase telemedicine equipment that they would not otherwise have the capital to invest in.

In addition, in the short term, it would be in the public interest for the Commission to adopt a rule providing for unexpended RHC funds totaling approximately $375 Million that were unused over the past 3 years to be used to offset any amounts that exceed the $400 Million cap – for FY 2017 and continuing-- until such time as the cap is raised by the FCC or by Congress. This will avoid possible interruption to the existing delivery of rural telehealth programs upon which rural patients have come to rely for critical health care. Such a rule would be consistent with other rules currently in place under the FCC's Universal Service Programs. The much larger schools and libraries support mechanism under the E-rate Program, currently permits unused funding from prior years to be used in future years.[18] Telehealth programs established under the RHC Program, which often involve medical care in life and death situations for rural patients, are no less deserving of such consideration in terms of unused funding. The FCC, on its own authority, could further accelerate broadband adoption in the healthcare context by adopting a comparable rule for the RHC Program, and alleviate the current threat of surging demand for the underfunded RHC Program.

Finally, appropriated funding for the Rural Healthcare Connect Fund needs to be made permanent. The current appropriation for the RHC Fund is only through 2021. If there is a "**Broadband Health Imperative**" this funding needs to be a permanent appropriation at adequate funding levels to encourage healthcare providers to make corresponding investments in personnel, equipment and in raising consumer awareness about telehealth solutions. Rural healthcare systems are willing to make these long term investments provided that they have long

[18] 47 C.F.R. § 54.507(a)(6).

term assurance that the support they need for broadband infrastructure in underserved areas will remain beyond the next few years.

V. Limitations on RHC Program Support for Broadband Connections Provided "Off-Site" Impact the Delivery of Telemedicine and Telehealth

While the amount of funding allocated to the RHC Program needs to be increased, if it is, then other eligible health care provider sites could be added to the list of eligible recipients at a very modest cost. Restricting Healthcare Connect Funding to existing rural health care providers[19], as well as skilled nursing facilities, off-site data centers and off-site administrative offices[20] limits the ability of health systems to transform and innovate healthcare delivery outside of the confines of the rural not-for-profit hospital or rural health clinic. Expanded broadband support, accompanied by an increase in the funding cap to support such expansion, is needed for telehealth and telemedicine programs at patient locations. Such support could fund a variety of enhanced health care facility options for patients. These options include home hospice end-of-life and assisted living options for patients outside of the hospital who wish or need to receive medical support outside of the hospital. With the assistance of broadband-supported devices in the home, practitioners could receive real-time information on patient care in the home and provide informed instruction to home care providers.

Broadband support could also be utilized for "micro clinics" located in nursing homes, whereby health systems lease space in a nursing home and provide remote patient monitoring diagnostics connecting to the hospital virtual-private-network over an Internet-only connection. Lastly, broadband support for home medical devices, such as wireless scales and blood pressure cuffs that transmit data directly between the patient and the physician would allow physician access to data remotely through a simple Internet connection and authenticated access. Coverage

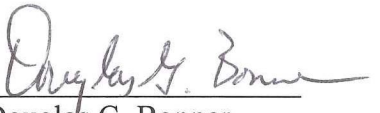
[19] *See* 47 C.F.R. § 54.600(a) for list of eligible "health care providers".
[20] 47 C.F.R. § 54.637.

for data charges associated with these devices would significantly help the provision of healthcare and patient monitoring at the patient's home.

VI. Conclusion

Geisinger applauds the Commission's efforts to gather information on methods to support the adoption and accessibility of broadband-enabled health care solutions, especially in Geisinger's rural footprint where Geisinger has been able to see firsthand the positive impact that such solutions can have on its high-risk, elderly patient population. Crucial to this effort is the ongoing funding support of the Rural Healthcare Program, accompanied by an increased funding cap sufficient to meet the ongoing needs of Program participants. In addition, expanded support for telehealth models utilized outside of the hospital site in patient residences and micro-clinics would extend the benefits of telehealth and telemedicine to many patients beyond the rural health care providers currently defined under Commission rules and result in improved patient care and an overall reduction of in-patient hospital admission costs.

Respectfully submitted,



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